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(71) Applicant (for all designated States except US):
GRYPHON THERAPEUTICS, INC. [US/US]; 600
Gateway Boulevard, South San Francisco, CA 94080-7014
(US).

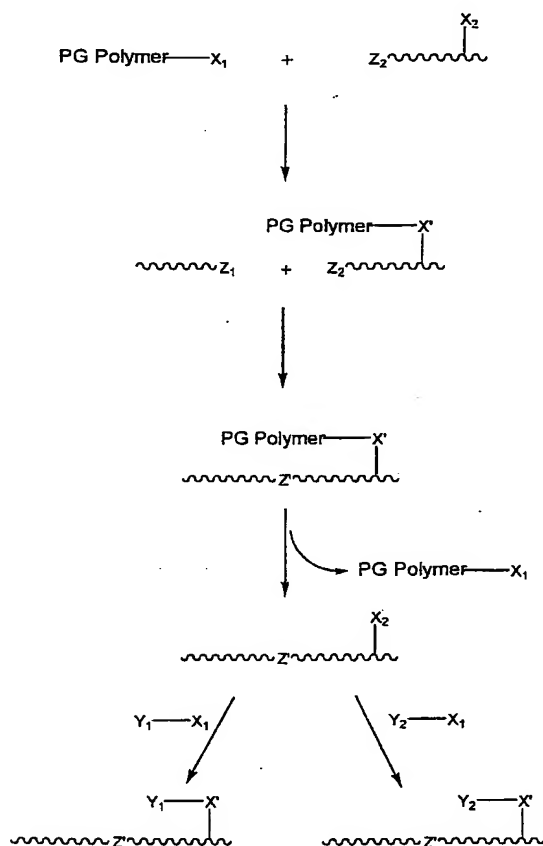
(72) Inventors; and
(75) Inventors/Applicants (for US only): KOCHENDOER-
FER, Gerd, G. [DE/US]; 686 66th Street, Oakland, CA
94609 (US). SHAO, Haiyan [CN/US]; 251 Winchester
Court, Foster City, CA 94404 (US). CRESSMAN, Sonya
[CA/CA]; 14-3449 Hallberg Road, Ladysmith, British Co-
lumbia V9G 1L2 (CA).

(74) Agent: FRANCIS, Carol, L.; Bozicevic, Field & Francis
LLP, 200 Middlefield Road, Suite 200, Menlo Park, CA
94025 (US).

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(54) Title: MULTIPLEX POLYMER LIGATION



(57) Abstract: The invention concerns a multiplex polymer ligation method involving water-soluble polymeric protecting groups, compositions and methods of use. The method involves synthesis of a first compound bearing one or more water-soluble polymeric protecting groups followed by replacing one or more of the water-soluble protecting groups with a chemical adduct of interest. Multiple different compounds derived from the first compound can be readily prepared by splitting the first compound into first and second reaction systems, followed by replacing one or more of the water-soluble polymeric protecting groups of the first reaction system with a first chemical adduct, and replacing one or more of the water-soluble polymeric protecting groups of the second reaction system with a second chemical adduct of interest, where the first and second chemical adducts are different. Also provided are kits useful for carrying out the multiplex polymer ligation methods of the invention.